MINES & MINERS

RARE SPECIMENS.

It is to be regretted that the men whose every-day work takes them into places where they find the rarer specimens of minerals are not lovers of the cabinet, or are so itineiant in their location that they cannot carry these really valuable specimens from place to place with them, writes Letson Balliet in the Mineral Collector. Many times in the course of the month I see ore brought out that would be highly prized by the mineral collector, while the intrinsic bullion value is small, yet there is nothing for me to do but to throw it into the mill.

Wire Gold.—One specimen if pure white quartz came out last month literally filled with wire gold. A few specimens of quartz crystals showed at one end, with wire gold protruding from around the base, while all the little cracks and crevices seem filled with leaf gold. The piece, quartz and all, is about the size of a man's fist, or a trifle smaller, and by the specific gravity test indicates that it contains about $36 bullion value. This is a remarkably fine specimen, yet I have no place to keep it and will be compelled to throw it into the mill.

Crystallized Gold.—One specimen, the only one I have ever seen, came out last month in a car of ore and I accidentally found it. It is about one inch long, in the form of a heavy wire of gold, while all along its length are little crystals of pure gold, adhering as rock sand might to a string. The bullion value was about $1, but as a specimen it was worth a good deal more.

Quartz Showing Free Gold.—Large numbers of fine specimens of this come out every day and week, but there are too many varieties to admit of and description here. t is an everyday occurrence to ruthlessly crush up specimens with a few cents or dollars' worth of gold in them that would be worth twenty times as much to the collector.

Rich ore showing no free gold are common, and many fine specimens appear daily. The peculiar varieties from many mines would make fine specimens for any cabinet.

Native Silver.—Is by no means uncommon, yet many cabinets lack good specimens. One small pocket piece that I have weighs 1½ ounces and contains one ounce of silver and one-half ounce of gold, taken from the Comstock lode.

Molybdenite Ore.—This very rare element, found in a peculiar quartz rock in a few localities, is a great novelty. I have probably a ton of fine specimens that I have saved from the mine and carried into the tool house at different times, because my old love for a cabinet was too strong in me to let me destroy them. This ore is worth about $1 an ounce as taken from the mine (metal value at reduction works.) This is the only molybdenite mine in California, and is so isolated on a desert that few care to visit it.—Western Mining World.

PROSPECTING A SCIENCE.

The practical prospector is rapidly taking the place of the ignorant and inexperienced, says the Mining and Scientific Press. He has paid for his knowledge, not by years of loss mixed up with his gains, to indelibly impress his experience upon the mental faculties. It is a business to which few are adapted, and fewer still are successful. There is nothing in the business world that requires such a wide knowledge as that of mining and prospecting. The practical prospector of today understands every detail of the solftaric, dynamic and chemical factors most effective in the world's past periods of universal formation. He has learned that while heat, water and vapors have produced deposits in veins and otherwise, many of which have proven valuable, that the greater part of the great bonanzas of the world are always in connection with two of the six principal divisions of igneous or erruptive rocks—trachyt and felsyte—the former generally lying in great fields and truncated masses, the latter in dikes and in overflows and older formations. These again have been divided into various characteristics, owing to the period of eruption or subsequent metamorphism, all of which have been instrumental in mineralizing the adjoining country rocks in veins and deposits. The secrets of the modern prospector and mine manager lie in his knowledge of the dates and effects of the porphyry overflows and intrusions. The advance from prehistoric mining was slow, but is now coeval with all other industries and scientific attainments.

QUITE HANDY.

Mr. Robert Clinch of Butte, Mont., has obtained a patent on a miner's folding candlestick, which aside from its primary purpose, embodies several small instruments in combination which are essential in miner's use, all of which can be interfolded very compactly and carried in the pocket. The device contains a handle, having a bifurcated end, which receives a spike adapted to fold back close. The outer holder of sheet metal, bent in cylindrical form, is secured to a short shaft pivoted through a lug, the opposite end of this shaft carrying the hook, whereby the whole device is hung or attached for service, the candle socket being erect with the hook, when the latter is brought into service. A small flat lever is fulcrumed in the handle bow by a rivet, its outer end forming a curved jaw, the inner concave face of which is serrated to correspond to the contiguous serrated recess in an arm. A V-shaped spring has one end secured to the inside of the handle bow, and its free end presses the lever. This lever is intended for use in crimping the caps on the fuses used for blasting.

NUGGETS FROM THE HILLS.

F. X. O'Brien is in Prescott from his mining camp.

The Oro Plata mine is yielding more gold than they have teams to haul.

The Oro Plata near Cerbat is a large shipper of ore, the largest in Mohave county.

Mr. Metz, who is interested in the Climax and Standard mines in Dos Cabezas camp, was in Wilcox Saturday.

J. F. Osenburgn is up from his mining camp near Congress, being his first trip to Prescott since he left last November.

McPherson & Co. of Tombstone have the contract for hauling ore from the Pena Blanco mine to the railway at Calabasas.

The Martin and Wilson camp about six miles northeast of Harrisburg is rapidly developing into a wonderful strike .

L. S. Strickler, who has had charge of the assaying department for J. T. Dougine at Santa Maria, left Prescott Tuesday for Albuquerque.

Deputy Sheriff Otto Moore has resigned and removed with his family to Dragoon, where he is interested in some promising mines.

Mr. James Demorest, the well known mining man of Dos Cabezas camp, left Wednesday night for Tucson from which place he goes to look at mining property. In a few days he will proceed to northern California to revisit old haunts.

Much steady development work is being done on many claims in the various mountain ranges of Cochise county, of which the public hears but little. If an accurate census could be taken of the number of men engaged in mining in the county the result would be surprising.

Mr. O. B. Hardy is vigorously pushing development work on the Pena Blanco mine in Neon canyon, toward the Oro Blanco country, and is shipping two carloads of ore weekly. It runs about 65 per cent lead with a fair showing of silver.—Oasis. Mr. Hardy has a bond on the Gallen and Loudon grop of mines near Prescott.

Yoeman & Blucher are engaged in cutting stulls and running timbers near the Jersey Lily mine. While shooting timbers down a hill a few days ago a log going at a terrific rate of speed caught fire. The fire spread and 2,000 feet of mining timbers belonging to these gentlemen, as well as some standing timber were burned.

The New York Herald of the 23d says: "The action brought by John Elsey against B. C. Davis, who charged Davis with selling him worthless mining stock, was dismissed yesterday by Magistrate Braun, who said that the case never ought to have been brought into court." Mr. Davis is president of the Copper King at Bisbee whose arrest caused much unsavory comment in mining circles.

RANGE CONDITIONS.

The June bulletin of the National Livestock association, issued from Denver, says that the abundant rains that have fallen upon the ranges of the west and northwest have created the most encouraging conditions experienced for twenty years and that the favorable weather has made pasturage so early that the movement of cattle to northern grazing grounds will be three weeks earlier this year than last season. "It is predicted that if these conditions continue and the ranges 'cure up' right and do not get too rank in vegetation, that Utah, western Colorado, Idaho and the entire inter-mountain country will have cattle fat enough to go direct from the ranges to market at an early date. It is estimated that the number of this class that will be sent from Utah and Colorado will reach 12,000 head more than in former years."

Southern ranges have been so good that it has not been necessary to move cattle from the south and shipments from that territory up to date have been about one-third less than a year ago. The scarcity of cattle and the wide ranges over which they are scattered in the south as well as in the west and northwest give promise of abundance of feed during the coming winter.

The high price of corn coupled with abundant pasturage in the territory and Texas has reduced the receipts of stock cattle in Kansas. Many cattle contracted for Kansas and Nebraska delivery are now on territory and Texas grass, where they will be held until ready to go into feeding pens in the fall. The Indian Territory pastures, it is estimated, have 100,000 more cattle than last year.

The bulletin says: "It may be said that if the price of corn continues to advance or even remains where it is now, that feeders, who purchase stock cattle at the prices ruling this spring, have excellent reasons to anticipate a substantial advance in the price of their fattened animals this fall and winter. There is a material shortage already in this class of stock, which will be another factor in bringing about this result."

The demand for scrub stock in every branch of livestock industry is becoming more contracted each season, and in no other branch have men learned their lesson better than in that of feeding cattle for the market. All know that in that business the quality of the animal fed decides whether there will be profit or loss in feeding. The men who paid high prices at the start were the men who made money in the end.

IN A PEANUT FACTORY.

When the peanuts arrive at the factory they are rough and earth-stained and of all sizes and qualities, jumbled together. The bags are first taken up by iron arms projecting from an endless chain to the fifth story of the factory. Here they are weighed and emptied into large bins. From these bins they fall to the next story, into large cylinders, fourteen feet long, which revolve rapidly, and by friction the nuts are cleaned from the earth which clings to them, and polished, so that they come out white and glistening.

From this story the nuts fall through shoots to the third and most interesting floor. Imagine rows of long, narrow tables, each divided lengthwise into three sections by thin, inch-high strips of wood. These strips also surround the edge of the table. Each of these sections is floored with a strip of heavy white canvas which moves incessantly from the mouth of the shoot to an opening leading down below at the further end of the table. These slowly moving canvas bands, about a foot wide, are called the "picking aprons."

Upon the outer aprons of each table dribbles from the shoot a slender stream of peanuts, and on each side of the table, so close together as scarcely to have "elbow room," stand rows of negro girls and women picking out the inferior peanuts as they pass and throwing them into the central section. So fast do their hands move at this work that one cannot see what they are doing till they cast a handful of nuts into the middle division. By the time a nut has passed the sharp eyes and quick hands of eight or ten pickers one may be quite certain that it is a first class article, fit for the final plunge down two stories into a bag which shall presently be marked with a brand which will command for it the highest market price.

The peanuts from the central aprons fall only to the second story, where they undergo yet another picking over on similar tables, the best of these forming the second grade. The third grade of peanuts, or what remains after the second picking, is then turned into a machine which crushes the shells and separates them from the kernels. These are sold to the manufacturers of candy, while the shells are ground up and used for horse bedding. So no part of this little fruit, vegetable, or nut, whichever it may turn out to be, is finally wasted, but all serves some useful purpose.

HOW IT AFFECTS.

Firing a Big Gun Brings About Many Physical Changes.

Not one man in ten thousand has a clear idea of just what happens when a big cannon is fired. The physical manifestations are numerous. Even professors of chemistry and physics are stumped when they want to differentiate all the gases set loose and the peculiar effects they induce. The puff of whitish smoke, the flash of fire, the dim image of the flying projectile, the roar and the recoil are all familiar; but back of these is a complex mass of phenomena most bewildering to the mind of any but an artillery expert.

First, the cubes, disks, hexagons or irregular lumps of powder are chemically transformed into a powerful, expanding gas the instant firing takes place. Then there are innumerable by-products that even chemists do not understand.

The explosion of gunpowder is divided into three distinct stages, called the ignition, inflammation and combustion. The ignition is the setting on fire of the first grain, while the inflammation is the spreading of the flame over the surface of the powder from the point of ignition. Combustion is the burning up of each grain. The value of gun powder is due to the fact that when subjected to sufficient heat it becomes a gas which expands with frightful rapidity. The so-called explosion that takes place when a match is touched to gun powder is merely a chemical change, during which there is a sudden evolution of gases from the original solid.

It has been calculated that ordinary gun powder on exploding expands about nine thousand times, or fills a space this much larger as a gas than when in a solid form. When this chemical change takes place in a closed vessel the expansion may be made to do a work like that of forcing a projectile along the bore of the great gun or test tube in the line of least resistance.

The hardest work a gunner is called upon to do is to stand the tremendous shock. The forces exerted by these gases in expanding seem to radiate in all directions from the cannon, as ripples are caused by dropping a pebble in a pool of still water. As a matter of fact, it has been discovered that these lines of forces are exceedingly complicated affairs and play very queer pranks about the cannon. As a result few people know just which is the safest or the most dangerous position for a gunner to take beside his gun. In the case of the great 13-inch guns on our monitors, a position back of the gun is much easier than one nearer the muzzle.

In addition to this force, there is an immense pressure exerted on the sides of the cannon, so that another distinct series of shocks also radiate outward from the barrel of the gun. These lines of force are influenced, besides, by the recoil of the gun, which tends to make the lines curve outward and intensifies the shock. These are in turn more or less compensated by the forces of the air opposing them as it rushes into the mouth of the cannon when the projectile leaves it. As a result of all these forces the atmosphere is, of course, violently disturbed. Although no projectile strikes the gunner, who must stand by, it will be seen that the air is full of missiles in the form of invisible lines of force or vibrations which bombard, as it were, every part of the gunner's body at the same time.

An examination and analysis of the effect produced upon the human system and the mind by the firing of a cannon is most engrossing. Men generally accounted courageous tremble violently in their knees; others feel nauseated; some have severe headaches; a few have had their ear drums split or the action of their heart affected.

Take the vital organ, the heart, first. In the space between the right auricle and ventricle are a set of fine, thread-like cords called the tendineae. The concussion makes them tremble like timbers in a building when there is an earthquake. In a weak man the chamber of the heart is left open for an instant; the opening and closing spfings lose their control; the heart shakes; possibly the choradae tendineae are snapped; contraction or dilation of the organ ensues and in some instances death follows.

Deafness induced by an explosion may be traced to the sudden pressure upon the inner orifice of the ear and the tremendous vibration set up. The thin, transparent, fairly bright membrane called the drum of the ear is burst, like a piece of tissue paper held taut and forcibly blown upon. Sounds are conveyed by the beating of a tiny mallet upon this anvil. If the beating is too rapid and too forcible the membranes may be ruptured, a temporary disturbance of the mind occurs and the sufferer becomes dizzy.

When the knees tremble it is due to the nervous shock produced in the cerebellum. Al the nerves and muscles are thrown into atonic contractions and relaxation and the knees appear to give way.

Nausea is also caused by the physiological change that takes place in the brain. There is a pressure of blood there, and the stomach, responding, tries to empty itself.—Philadelphia Times.

FOURTH OF JULY RATES

Via the S. F. P. & P. will be one fare, round trip tickets, good going July 2, 3, 4, 5, and good returning until 8th. Big attractions at Phoenix and Prescott and pleasant little picnics at other points. Visit your neighbors and enjoy the holiday with them. Full information cheerfully given at the city office, 44 West Washington street. E. W. Gillett, general agent.

NOTICE TO TRAVELERS.

On account of the comfortable accommodations to be secured at Maricopa at low rates, it is found to be more satisfactory to the public to handle seaside excursionists on the regular train, and until further notice the M. & P. railroad will not run a special from Phoenix on Friday morning, as has been advertised.

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NOTICE TO CREDITORS.

Estate of James Roarke, deceased.

Notice is hereby given by the undersigned administratrix of the estate of James Roarke, deceased, to the creditors of and all persons having claims against the said deceased, to exhibit them, with the necessary vouchers, within ten months after the first publication of this notice to the said administratrix at the office of Baker & Bennett in Fleming Building in the city of Phoenix, the same being the place for the transaction of the business of said estate, in said County of Maricopa. CORA BRILL,
Administratrix of the estate of James Roarke, deceased.

Dated, Phoenix, A. T., this 6th day of June, 1898.

First published in the Arizona Republican June 6th, 1898.

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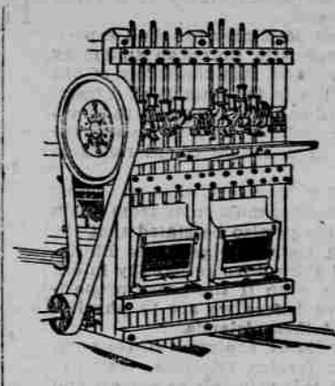

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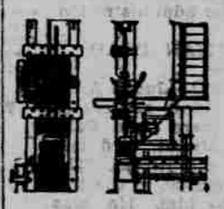

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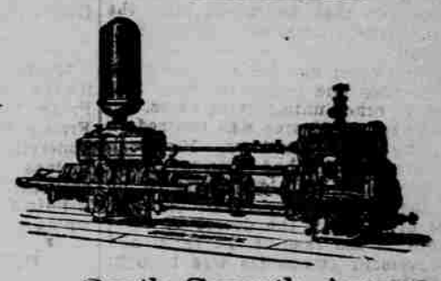

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